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Oliver Hurst-Hiller

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EXAMINER

FERNANDEZ RIVAS, OMAR F

ART UNIT

PAPER NUMBER

2129

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/806,271	Applicant(s) HURST-HILLER ET AL.	
	Examiner OMAR F. FERNANDEZ RIVAS	Art Unit 2129	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 November 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 8, 10-17, 25 and 27-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8, 10-17, 25 and 27-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is in response to an amendment entered on 11/24/2009.

Status of Claims

2. Claims 1, 10 and 25 have been amended. Claims 7, 9, 18-24 and 26 have been previously cancelled. Claims 1-6, 8, 10-17, 25 and 27-29 are pending on this application.

Claim Objections

3. In light of the amendments made, the objection of claims 1, 10 and 25 is withdrawn.

Claim Rejections - 35 USC § 112

4. In light of the amendments made, the rejection under 35 USC 112 of the previous Office Action is withdrawn.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless —(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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6. Claims 1-6, 8, 10-17, 25 and 27-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Biebesheimer et al. (US Patent Application Publication #2002/0152190, referred to as **Biebesheimer**).

Claims 1, 10 and 25

Biebesheimer anticipates a method for obtaining predicted user satisfaction data (not further defined) regarding the performance of a search mechanism which provides search results in response to user queries (**Biebesheimer**: abstract, L1-26; page 2, pars 16-20; page 3, par 30; page 5, pars 42-44; Examiner's Note (EN): Obtaining a response set based on relevancy to the user's query is obtaining predicted user satisfaction data. Moreover, the indexing function determines the value of the search results (the response set) for a user in their context. Also note the weighting function (user satisfaction) of the Adaptive Indexing), comprising: storing interaction of users with the search results obtained in response to a query (**Biebesheimer**: pg. 2, pars 13-20; pg. 3, par 32; pg. 4, par 37; pgs. 4-5, pars 41-44; pg. 6, pars 50-51; pg. 9, par 73; pg. 12, claims 5, 7; pg. 13, claim 24; Figs. 1 and 6; EN: The user's interaction records include resources chosen or rejected by the user from the list displayed. Also note that the User Interaction Records Database stores users' prior queries); determining **at least one** predictive pattern model for predicting user- satisfaction with the search results from the stored interaction of multiple users with the search results to improve the quality of search results (**Biebesheimer**: pg. 2, pars 13-20; pg. 3, par 32; pg. 4, par 37; pgs. 4-5, pars 41-45; pg. 6, pars 50-51; pg. 9, par 73; pg. 12, claims 5, 7; pg. 13, claim

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24; Figs. 1 and 6; EN: The resource indexing functions are predictive pattern models. Note that each function predicts a response set that the user eventually selected (user satisfaction) and contain the response set most relevant to the users); storing the **at least one** predictive pattern model (**Biebesheimer**: pg. 2, pars 13-20; pg. 3, par 32; pg. 4, pars 37-38; pgs. 4-5, pars 41-45; pg. 6, pars 50-51; pg. 9, par 73; Figs. 1 and 6) and applying said predictive pattern model to context-based user behavior data to determine a satisfaction value for the users with queries that indicate the satisfaction of the users with the search results (**Biebesheimer**: pg. 2, pars 13-20; pg. 3, par 32; pgs. 4-5, pars 37-45; pgs. 5-6, pars 48-51; pg. 7, par. 64; pg. 9, pars 72-73; Figs. 1 and 6; EN: The adaptive indexing function uses an evaluation metric (such as the coverage of the resources eventually selected by a user given a query/context pair) from the user's feedback to optimize the indexing functions to maximize the number of successful retrievals. Note that the user interaction records include traces of previous interactions with **users** of the system, which are used to determine the response set), wherein the context-based user behavior data comprises user feedback data and context data associated with users feedback data, the context-based user behavior data acquired after receipt by users of the search results of said application of said predictive pattern model further comprises isolating a set of said performed queries which are unsatisfactory and which share a common characteristic in order to identify problems which appear for multiple users or queries (**Biebesheimer**: pg. 2, pars 13-20; pg. 3, par 32; pgs. 4-5, pars 37-45; pgs. 5-6, pars 48-51; pg. 9, pars 72-73; Figs. 1 and 6; EN: The adaptive indexing function uses an evaluation metric (such as the coverage of the

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resources eventually selected by a user given a query/context pair) from the user's feedback to optimize the indexing functions to maximize the number of successful retrievals. Note that the user interaction records include traces of previous interactions with users of the system. The exclusionary filters isolate unsatisfactory search queries).

Claims 2 and 11

Biebesheimer anticipates storing at least one predictive pattern model comprises utilizing data mining techniques (not further defined) to determine at least one predictive pattern for user satisfaction (**Biebesheimer**: page 5, par 43-44; EN: supervised learning is a data mining technique).

Claims 3 and 12

Biebesheimer anticipates said context-based user behavior data comprises explicit user feedback data (**Biebesheimer**: pages 4 and 5, par 41; page 6, pars 49-50; page 7, par 64, L1-12; page 8, pars 66-67; EN: obtaining data from the user defining the query is explicit user feedback as defined in page 2, par 17 of the present application).

Claims 4 and 13

Biebesheimer anticipates said context-based user behavior data comprises implicit user feedback data (**Biebesheimer**: page 2, par 19, L6-22; page 5, par 41, L7-25; page 6, par 50; EN: user interactions is user behavior data; the selections made by

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the user are implicit feedback as defined in page 2, par 17 of the present application).

Claims 5 and 14

Biebesheimer anticipates said context-based user behavior data is selected from the group comprising: user navigation to a new page using a hyperlink; user navigation to a new page using a history list; user navigation to a new page using an address bar; user navigation to a new page using a favorites list; user scrolling behavior; user document printing behavior; user adding a document to said favorites list; user switching focus to a different application; user switching focus back from a different application; user closing a window; user dwell time behavior; user initiation of a new query; sequences of user behaviors; and user inactivity without switching focus from a window relating to said performed query (**Biebesheimer**: page 3, pars 30-32; page 5, par 41, L7-17; pg. 6, pars 49-50; pg. 9, pars. 72-73; EN: redefining a query is initiating a new query, user interactions is a sequence of user behavior).

Claims 6 and 15

Biebesheimer anticipates said application of said predictive pattern model yields predicted user satisfaction data regarding said search mechanism (**Biebesheimer**: page 2, par 19; page 4, par 37; EN: the Adaptive Indexing algorithm applies the predictive pattern. Maximizing the number of successful retrievals by improving the resource indexing functions is yielding predicted user satisfaction data regarding the

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search mechanism. Also note that the indexing function retrieves the response set most relevant to the user), and where said method further comprises: displaying said predicted user satisfaction data (**Biebesheimer**: page 6, par 49; page 9, par 73; EN: the ordered response set is predicted user satisfaction data).

Claims 8 and 17

Biebesheimer anticipates said context-based user behavior data comprises a testing set of context-based user behavior data (**Biebesheimer**: page 3, par 33, L1-14; EN: The minimal user context vector is a testing set of context based user behavior).

Claim 27

Biebesheimer anticipates isolating problematic queries based on the predicted user satisfaction data (**Biebesheimer**: page 2, par 19, L6-22; page 5, pars 43.and 44).

Claim 28

Biebesheimer anticipates generating a summary of measured satisfaction based on the predicted user satisfaction data (**Biebesheimer**: page 5, par 45, L9-23; pg. 6, pars 50-51; pg. 9, par 73; EN: generating a response set based on the scoring or relevance (satisfaction data) to the user's query).

Claim 29

Biebesheimer anticipates monitoring a search mechanism responsive to the predicted user satisfaction data (**Biebesheimer**: page 2, par 19; page 4, par 37; page 5, pars 42-44; pg. 6, pars 50-51; pg. 9, par 73; Fig. 1; EN: If the system is learning, then some monitoring is taking place).

Response to Applicant's arguments

7. The Applicant's arguments regarding the rejection under 35 USC 102 have been fully considered but are not persuasive.

In reference to Applicant's arguments:

Claims 1-6, 8, 10-17, 25 and 27-29 stand rejected under 35 U.S.C. § 102 as being anticipated by Biebesheimer et al. (US Patent Application Publication #2002/0152190). The office action asserts that the Biebesheimer reference teaches a method of isolating unsatisfactory queries common to multiple users. The invention described in Biebesheimer is intended for a single user to operate and is intended to improve the search results of only that single user based on that user's prior search data.

Examiner's response:

As described by Biebesheimer, the User interaction Records include traces of previous interactions with **users** of the system. It also includes context information which includes organizational, community and environmental context. Also note that the User Interaction Record includes data for a user or **user group**. The adaptive indexing function uses an evaluation metric (such as the coverage of the resources

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eventually selected by a user given a query/context pair) from the users feedback to optimize the indexing functions to maximize the number of successful retrievals. Note that the user interaction records include traces of previous interactions with users of the system. The exclusionary filters isolate unsatisfactory search queries. Moreover, the adaptive indexing algorithm is trained using an amount of User Interaction Records and as such the interaction of all users is relevant when updating the indexing functions. The system learns about the user or user group and is able to discover user group characteristics and apply it to individuals. The response sets to common queries are generated based upon context variables (**Biebesheimer**: pg. 11, pars. 79-81).

It is also noted that if the system of Biebesheimer improves the search results for each individual user that interact with the system and uses the data received from all of the users when producing its results, then it improves the search results for all of the users of the system.

In reference to Applicant's arguments:

The office action proposes that the user controlled exclusionary filtering system described in Biebesheimer which is used to improve the search results of an individual user is analogous to a system designed to address the unsatisfactory search results of multiple users and is not adjusted by the individual users. The exclusionary measures described in Biebesheimer are "visible and modifiable to the user on the Detailed Specification Workspace..." (emphasis added). The Detailed Specification Workspace is a GUI "for enabling a user to change or create resource parameters using include logic

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or exclude logic for any attribute value selected in the Attribute-Value Workspace." Biebesheimer para [0069]. The exclusionary activity described in Biebesheimer will only affect the individual user's search through the Detailed Specification Workspace which allows a user to "completely manage their search." Id. at [0072]. A user of this system will actively make selections in the Detailed Specification Workspace to improve the outcome of the current search they are performing.

Among Biebesheimer's options that users can change for their individual search is context data defined as cost, timing, quality and risk. As mentioned in the office action, while the system described in Biebesheimer does store user interaction data for multiple users, only the user interaction data associated with the user's profile is used to "train" the system for that specific user. Id. at [0037]. Therefore, the exclusionary measures described to improve a user's search results are based on that specific user's prior search data alone. The system described in Biebesheimer is not designed to analyze prior search data from a multitude of users to improve a current user's search results.

Examiner's response:

As disclosed in Biebesheimer, the user input is received and processed against the resource library, the user interaction records for this **user/user group** and the resource indexing functions to produce the response set. The system learns from the interaction of the users with the response set presented to the users and updates both the User Interaction Records and the Resource Indexing Functions, which serve to produce the most relevant set to the users. As such these functions are considered to

“isolate” queries that are unsatisfactory to all of the users since it will determine the response set most relevant to the user.

In reference to Applicant’s arguments:

In contrast to the system described in Biebesheimer, the predictive pattern described in the claimed embodiments utilizes data from multiple users to refine the search results for multiple users. This system identifies problematic search terms based on data accumulated from multiple users. Once a problematic search term is identified a developer can isolate the search term and correct the problem for a multitude of users. After a correction to the system is made to address the problematic search term user satisfaction with the search results is expected to increase. Already collected data can then be used as a benchmark to verify that the fix has been successful for the problematic search term. It should be noted that the correction and improvement process is transparent to the user in this system. Therefore, the method described for isolating problematic search terms and improving search results for multiple users is not taught by Biebesheimer where the system is designed to improve the search results of a single user. Accordingly, Applicant respectfully requests withdrawal of the aforementioned rejections.

Examiner’s Response:

The claims and only the claims form the metes and bounds of the invention. It is noted that the features upon which applicant relies (i.e., identifying problematic search terms and using these search terms to correct the system) are not recited in the

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rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Examination Considerations

8. Examiner has cited particular columns and line numbers (or paragraphs) in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific imitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the Applicant in preparing responses, to fully consider the references in their entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner. The entire reference is considered to provide disclosure relating to the claimed invention.

9. It is the goal of the Examiner to move the applicant's claimed invention towards allowability, if possible. However, as presently claimed, the applicant's claimed invention is substantially broad and is broad enough to read on the prior art of record. The examiner respectfully request that the applicant consider what the invention is, and where the line between the prior art (cited by the examiner and/or known by the applicant) and the applicant's intended invention lay. This request is made so the examiner can help the applicant arrive at claim language that not only traverses the language taught in the presently pending and/or previously disclosed prior art, but also

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traverses concepts taught (or suggested) in prior art known by the examiner and/or applicant which has not been cited. Also, the examiner is more than willing to have an interview with applicant, but requests that the applicant disclose what he or she considers to be the most inventive portion of the claimed and/or disclosed invention.

10. In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

11. The claims and only the claims form the metes and bounds of the invention. "Office personnel are to give the claims their broadest reasonable interpretation in light of the supporting disclosure. In re Morris, 127 F.3d 1048, 105455, 44USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claim are not read into the claim. In re Prater, 415 F.2d, 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969)" (MPEP p 2100-8, c 2, I 45-48; p 2100-9, c 1, I 1-4). The Examiner has full latitude to interpret each claim in the broadest reasonable sense. Examiner will reference prior art using terminology familiar to one of ordinary skill in the art. Such an approach is broad in concept and can be either explicit or implicit in meaning.

12. Examiner's Notes are provided with the cited references to prior art to assist the applicant to better understand the nature of the prior art, application of such prior art and, as appropriate, to further indicate other prior art that maybe applied in other office actions. Such comments are entirely consistent with the intent and spirit of compact

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prosecution. However, and unless otherwise stated, the Examiner's Notes are not prior art but a link to prior art that one of ordinary skill in the art would find inherently appropriate.

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

14. Claims 1-6, 8, 10-17, 25 and 27-29 are rejected.

Correspondence Information

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to OMAR F. FERNANDEZ RIVAS whose telephone number is (571)272-2589. The examiner can normally be reached on Mon-Fri 8:00-4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on (571)-272-4201. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Omar F. Fernández Rivas/
Examiner, Art Unit 2129

/Donald Sparks/
Supervisory Patent Examiner, Art
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